

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

REGION X

IN THE MATTER OF:

Boeing Electronics Manufacturing Facility,
Seattle, Washington,

The Boeing Company,

Respondent.

ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON
CONSENT FOR REMOVAL ACTION

U.S. EPA Region X
CERCLA Docket No. 10-2007-0091

Proceeding Under Sections 104, 106(a), 107
and 122 of the Comprehensive
Environmental Response, Compensation,
and Liability Act, as amended, 42 U.S.C.
§§ 9604, 9606(a), 9607 and 9622.



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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent (Settlement Agreement) is entered into by the United States Environmental Protection Agency, Region X (EPA), and The Boeing Company (Boeing) as Respondent. This Settlement Agreement provides for the performance of a non-time-critical removal action by Respondent and the reimbursement of certain response costs incurred by the United States at or in connection with such action for the Boeing Electronics Manufacturing Facility (EMF) at 7355 Perimeter Road South, approximately one half mile east and upgradient of Boeing Plant 2 on the far east side of King County International Airport, also known as Boeing Field, and within the Lower Duwamish Waterway Superfund Site (LDW Site) in Seattle, Washington as a source thereto.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended (CERCLA).

3. EPA has notified the State of Washington Department of Ecology (State or Ecology) of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). Ecology is co-managing and overseeing cleanup of the LDW Site jointly with EPA.

4. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute admissions of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of facts, conclusions of law, and determinations in Sections IV and V of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its

1 terms. Respondent agrees to undertake all actions required by this Settlement Agreement,
2 including any modifications thereto, and consents to and will not contest EPA's authority to
3 issue or to enforce this Settlement Agreement. Except as expressly provided in this Settlement
4 Agreement, each party reserves all rights and defenses it may have.

5 6 **II. PARTIES BOUND**

7 5. This Settlement Agreement applies to and is binding upon EPA and upon
8 Respondent and its successors and assigns. No change in the ownership, corporate or other
9 status of Respondent including, but not limited to, any transfer of assets or of any facility owned
10 or operated by Respondent shall alter Respondent's responsibilities under this Settlement
11 Agreement.

12 6. Respondent shall ensure that its contractors, subcontractors, and representatives
13 performing any of the Work receive a copy of this Settlement Agreement within 14 days from
14 the Effective Date or within 14 days of their contract to work on the project, and that they
15 comply with this Settlement Agreement. Respondent shall be responsible for any
16 noncompliance with this Settlement Agreement.

17 18 **III. DEFINITIONS**

19 7. Unless otherwise expressly provided herein, terms used in this Settlement
20 Agreement which are defined in CERCLA or in regulations promulgated under CERCLA shall
21 have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed
22 below are used in this Settlement Agreement or in the appendices attached hereto and
23 incorporated hereunder, the following definitions shall apply:

24 a. "CERCLA" shall mean the Comprehensive Environmental Response,
25 Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*
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1 b. "Day" shall mean a calendar day. In computing any period of time under
2 this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or Federal
3 holiday, the period shall run until the close of business of the next working day.

4 c. "Effective Date" shall be the effective date of this Settlement Agreement as
5 provided in Section XXX.

6 d. "Engineering Evaluation/Cost Analysis" (EE/CA) shall have the definition
7 and attributes described in the NCP, as may be modified by this Settlement Agreement.

8 e. "EPA" shall mean the United States Environmental Protection Agency and
9 any successor departments or agencies of the United States.

10 f. "Ecology" or "State" shall mean the State of Washington Department of
11 Ecology and any successor departments or agencies thereof.

12 g. "Future Response Costs" shall mean all costs, including, but not limited to,
13 direct and indirect costs, that the United States has incurred in planning, developing and
14 negotiating this Settlement Agreement, in reviewing or developing plans, reports and other
15 items pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing,
16 overseeing, or enforcing this Settlement Agreement, including, but not limited to, payroll
17 costs, contractor costs, travel costs, laboratory costs, costs incurred by EPA associated with
18 EPA's preparation of any EPA decision documents (including any Action Memoranda), the
19 costs incurred pursuant to Paragraph 23 (costs and attorneys fees and any monies paid to
20 secure access, including the amount of just compensation), Paragraph 33 (emergency
21 response), and Paragraph 59 (work takeover), as well as any other activities related to the
22 EMF/EMF plume undertaken by EPA and/or Ecology at Respondent's request.

23 h. "Interest" shall mean interest at the rate specified for interest on
24 investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507,
25 compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a).
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1 The applicable rate of interest shall be the rate in effect at the time the interest accrues. The
2 rate of interest is subject to change on October 1 of each year.

3 i. "National Contingency Plan" or "NCP" shall mean the National Oil and
4 Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of
5 CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

6 j. "Paragraph" shall mean a portion of this Settlement Agreement identified
7 by an Arabic numeral.

8 k. "Parties" shall mean EPA and Respondent.

9 l. "RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C.
10 §§ 6901, *et seq.* (also known as the Resource Conservation and Recovery Act).

11 m. "Section" shall mean a portion of this Settlement Agreement identified by a
12 Roman numeral.

13 n. Settlement Agreement" shall mean this Administrative Settlement
14 Agreement and Order on Consent and all appendices attached hereto (listed in Section XXIX).
15 In the event of conflict between this Settlement Agreement and any appendix, this Settlement
16 Agreement shall control.

17 o. "Statement of Work" or "SOW" shall mean the statement of work for
18 implementation of the removal action, as set forth in Appendix A to this Settlement Agreement,
19 and any modifications made thereto in accordance with this Settlement Agreement.

20 p. "Waste Material" shall mean 1) any "hazardous substance" under Section
21 101(14) of CERCLA, 42 U.S.C. § 9601(14); 2) any pollutant or contaminant under Section
22 101(33) of CERCLA, 42 U.S.C. § 9601(33); 3) any "solid waste" under Section 1004(27) of
23 RCRA, 42 U.S.C. § 6903(27); and 4) any "dangerous waste" under RCW 70.95E.010(1).

24 q. "Work" shall mean all activities Respondent is required to perform under this
25 Settlement Agreement.
26

IV. FINDINGS OF FACT

8. EPA finds the following facts which Respondent neither admits nor denies:

a. The EMF was built by Boeing in the 1930s on the far east side of Boeing Field and was initially used for prototype aircraft assembly. It was reconfigured in the 1960s to manufacture electronic circuit boards using, among other things, solvent cleaning equipment including a vapor degreaser, underground solvent storage tank and associated supply piping.

b. Electronic circuit board manufacturing was discontinued in the late 1970s, and the associated vapor degreasing equipment was removed in the early 1980s. During the removal of this equipment, trichloroethene (TCE) contamination of groundwater underlying the EMF was discovered. TCE releases from the EMF have been tracked as a distinct plume of TCE and its degradation by-products from the EMF, approximately 0.5 miles east of Plant 2, through the approximate centerline of buildings 2-40 and 2-41 on Plant 2, and into the Duwamish Waterway. The EMF buildings were demolished in 1996.

c. The plume contains significant concentrations of chlorinated volatile organic compounds (VOCs). TCE, cis-1,2-dichloroethene (DCE), and vinyl chloride are the chlorinated VOCs in the highest concentrations. The portion of the plume that underlies Plant 2 is predominantly DCE and vinyl chloride. Vinyl chloride is used as the primary indicator constituent for delineating the extent of the plume because it is the last chlorinated breakdown product of TCE, and is therefore the constituent most likely to be found at the leading edge and margins.

d. Respondent has undertaken response action to address the plume under the Washington State Department of Ecology's (Ecology) Voluntary Cleanup Program, including the injection of substantial quantities of potassium permanganate and lactose derivatives, and implementation of an enhanced reductive dechlorination bioremediation remedy utilizing

1 sodium lactate, sugar products and emulsified vegetable oil. An in-situ air stripping system at
2 the plume source has been in operation since 1997.

3 e. The EMF plume may be commingling with other VOC groundwater
4 plumes originating from solid waste management units located within the 2-40/2-41 Buildings
5 on Boeing Plant 2.

6 f. Boeing is a Delaware Corporation doing business in the state of
7 Washington, primarily engaged in aircraft, aerospace and defense manufacture and
8 technology.

9 g. Plant 2 is the subject of an ongoing Resource Conservation and Recovery
10 Act (RCRA) Corrective Action Administrative Order on Consent (AOC) issued to Boeing by
11 EPA in 1994. Boeing was given the choice of addressing the EMF/EMF plume pursuant to
12 either an amendment to the 1994 RCRA AOC or pursuant to the instant CERCLA Settlement
13 Agreement. Boeing chose the latter.

14 h. On September 13, 2001, the LDW Site was listed on the National Priorities
15 List pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, at 66 Fed. Reg. 47583. Boeing is
16 one of four Respondents implementing a Remedial Investigation/Feasibility Study (RI/FS) for
17 the LDW Site pursuant to an RI/FS AOC issued jointly by EPA and Ecology in December 2000,
18 pursuant to CERCLA and the Washington Model Toxics Control Act (MTCA).

19 **V. CONCLUSIONS OF LAW AND DETERMINATIONS**

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21 9. Based on the Findings of Fact set forth above, EPA has made the following
22 determinations which Respondent neither admits nor denies:

23 a. EMF is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. §
24 9601(9).

25 b. The contamination found at and from the EMF/EMF plume, as identified in
26 the Findings of Fact above, includes "hazardous substances" as defined by Section 101(14) of

1 CERCLA, 42 U.S.C. § 9601(14), which may present an imminent and substantial danger to
2 the public health or welfare.

3 c. Respondent is a "person" as defined by Section 101(21) of CERCLA, 42
4 U.S.C. § 9601(21).

5 d. Respondent is a responsible party under Section 107(a) of CERCLA, 42
6 U.S.C. § 9607(a), and is liable for the performance of response action and for response costs
7 incurred and to be incurred at the EMF/EMF plume. Respondent is an "owner" and/or
8 "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20),
9 and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

10 e. The conditions described in the Findings of Fact above constitute an actual
11 or threatened "release" of a hazardous substance from the facility as defined by Section
12 101(22) of CERCLA, 42 U.S.C. § 9601(22).

13 f. The removal action required by this Settlement Agreement is necessary to
14 protect the public health, welfare, or the environment and, if carried out in compliance with
15 the terms of this Settlement Agreement, will be considered consistent with the NCP, as
16 provided in Section 300.700(c)(3)(ii) of the NCP.

17 **VI. SETTLEMENT AGREEMENT AND ORDER**

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19 Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the
20 Administrative Record for the Site, it is hereby Ordered and Agreed that Respondent shall
21 comply with all provisions of this Settlement Agreement, including, but not limited to, all
22 attachments to this Settlement Agreement and all documents incorporated by reference into this
23 Settlement Agreement.
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1 **VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR**

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3 10. Respondent shall retain one or more contractors to perform the Work and shall
4 notify EPA of the name(s) and qualifications of such contractor(s) within 10 days of the
5 Effective Date. Respondent shall also notify EPA in writing of the name(s) and qualification(s)
6 of any other contractor(s) or subcontractor(s) retained to perform the Work at least 7 days prior
7 to commencement of such Work. EPA retains the right to disapprove of any or all of the
8 contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected
9 contractor in writing, Respondent shall retain a different contractor and shall notify EPA of that
10 contractor's name and qualifications within 30 days of EPA's disapproval.

11 11. Within 7 days after the Effective Date, Respondent shall designate a Project
12 Coordinator who shall be responsible for administration of all actions by Respondent required
13 by this Settlement Agreement and shall submit to EPA the designated Project Coordinator's
14 name, address, telephone number, and qualifications. To the greatest extent possible, the
15 Project Coordinator shall be present or readily available during field Work. EPA retains the
16 right to disapprove of the designated Project Coordinator in writing. If EPA disapproves of the
17 designated Project Coordinator, Respondent shall retain a different Project Coordinator and
18 shall notify EPA of that person's name, address, telephone number, and qualifications within 7
19 days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice
20 or communication from EPA relating to this Settlement Agreement shall constitute receipt by
21 Respondent.

22 12. EPA has designated Laura Castrilli of the Office of Air, Waste and Toxics (AWT),
23 Region X, as its Project Coordinator. Except as otherwise provided in this Settlement
24 Agreement, Respondent shall direct all submissions required by this Settlement Agreement to
25 the EPA Project Coordinator at 1200 Sixth Avenue, M/S AWT-121, Seattle, WA 98101.
26

13. EPA and Respondent shall have the right, subject to Paragraph 11, to change their respective designated Project Coordinator. Respondent shall notify EPA 7 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notice.

VIII. WORK TO BE PERFORMED

14. Respondent shall perform, at a minimum, all actions necessary to implement the Statement of Work (SOW), which is attached as Appendix A.

15. The actions to be implemented generally include characterization of the EMF/EMF plume, and the development of an Engineering Evaluation/Cost Analysis (EE/CA) of removal action alternatives, including a recommended alternative.

16. EPA Guidance documents on the development of EE/CAs and the implementation of removal action under CERCLA, and additional relevant CERCLA guidance, shall be followed in implementing the SOW.

17. The primary objective of this removal activity is the removal, treatment and/or containment of the EMF plume and sources of hazardous substances thereto to mitigate or prevent further releases into the environment, and specifically into the LDW. The purpose of this Settlement Agreement is to conduct characterization and develop and analyze alternatives to enable EPA to select further removal action for the EMF/EMF plume.

18. For all Work, EPA may approve, disapprove, require revisions to, or modify a deliverable in whole or in part. If EPA requires revisions, Respondent shall submit a revised deliverable within 30 days of receipt of EPA's notification of the required revisions, unless otherwise noted in the SOW. Respondent shall implement the Work as approved in writing by EPA in accordance with the schedule approved by EPA. Once approved, or approved with modifications, the Work and the schedule, and any subsequent modifications, shall be incorporated into and become fully enforceable under this Settlement Agreement.

1 19. Respondent shall not commence any Work except in conformance with the terms of
2 this Settlement Agreement. Respondent shall not commence implementation of the Work
3 developed hereunder until after receiving written EPA approval pursuant to this Section.

4 20. Reporting.

5 a. Respondent shall submit a written progress report to EPA concerning
6 actions undertaken pursuant to this Settlement Agreement every 30th day after the Effective
7 Date until termination of this Settlement Agreement, unless otherwise directed in writing by
8 the EPA Project Coordinator. These reports shall describe all significant developments during
9 the preceding period, including the actions performed and any problems encountered,
10 analytical data received during the reporting period, and the developments anticipated during
11 the next reporting period, including a schedule of actions to be performed, anticipated
12 problems, and planned resolutions of past or anticipated problems. These progress reports
13 may be submitted by electronic mail provided that on each due date Respondent places a
14 telephone call to the EPA Project Manager and either states that the progress report has been
15 electronically mailed or leaves a voicemail message to that effect. If this call is not timely
16 received, and the progress report is not timely received, the progress report will be deemed
17 late and stipulated penalties in accordance with Section XVIII of this Settlement Agreement
18 may be assessed.

19 b. At least 30 days prior to the conveyance of any interest in the EMF,
20 Respondent shall give written notice to the transferee that the property is subject to this
21 Settlement Agreement and written notice to EPA and Ecology of the proposed transfer,
22 including the name and address of the transferee. Respondent also agrees to condition any
23 transfer upon or otherwise require that its successor(s), if any, comply with the immediately
24 preceding sentence and Sections IX (Site Access) and X (Access to Information).
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1 21. Off-Site Shipments.

2 a. Respondent shall, prior to any off-site shipment of Waste Material derived
3 from the implementation of this Settlement Agreement to an out-of-state waste management
4 facility, provide written notification of such shipment of Waste Material to the appropriate
5 state environmental official in the receiving facility's state and to the EPA Project
6 Coordinator. However, this notification requirement shall not apply to any off-site shipments
7 when the total volume of all such shipments will not exceed 10 cubic yards.

8 i. Respondent shall include in the written notification the following
9 information: 1) the name and location of the facility to which the Waste Material is to be
10 shipped; 2) the type and quantity of the Waste Material to be shipped; 3) the expected schedule
11 for the shipment of the Waste Material; and 4) the method of transportation. Respondent shall
12 notify the state in which the planned receiving facility is located of major changes in the
13 shipment plan, such as a decision to ship the Waste Material to another facility within the same
14 state, or to a facility in another state.

15 ii. The identity of the receiving facility and state will be determined
16 by Respondent following the award of the contract for the removal action. Respondent shall
17 provide the information required by Paragraph 21(a) and 21(b) as soon as practicable after the
18 award of the contract and before the Waste Material is actually shipped.

19 b. Before shipping any hazardous substances, pollutants, or contaminants
20 from the EMF site to an off-site location, Respondent shall obtain EPA's certification that the
21 proposed receiving facility is operating in compliance with the requirements of CERCLA
22 Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall only
23 send hazardous substances, pollutants, or contaminants from the EMF/EMF plume to an off-
24 site facility that EPA has certified as in compliance with the requirements of the statutory
25 provision and regulation cited in the preceding sentence.
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IX. ACCESS

22. Respondent shall, commencing on the Effective Date, provide EPA and its representatives, including contractors, with access at all reasonable times to the EMF/EMF plume for the purpose of conducting any activity related to this Settlement Agreement. EPA shall provide reasonable notice to Respondent under the circumstances concerning any EPA activities under this Settlement Agreement for which access to the EMF/EMF plume will be necessary.

23. Where any action under this Settlement Agreement is to be performed in areas owned by, or in possession or control of, someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within 30 days after the Effective Date, or as otherwise specified in writing by the EPA Project Coordinator. Respondent shall immediately notify EPA if after using their best efforts it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing their efforts to obtain access. EPA may then assist Respondent in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. Respondent shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs).

24. Notwithstanding any provision of this Settlement Agreement, EPA retains all of its access authorities and rights, as well as all of its rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

1 the following: 1) the title of the document, record, or information; 2) the date of the document,
2 record, or information; 3) the name and title of the author of the document, record, or
3 information; 4) the name and title of each addressee and recipient; 5) a description of the
4 contents of the document, record, or information; and 6) the privilege asserted by Respondent.
5 However, no documents, reports or other information created or generated pursuant to the
6 requirements of this Settlement Agreement shall be withheld on the grounds that they are
7 privileged.

8 28. No claim of confidentiality shall be made with respect to any data submitted or to be
9 considered by EPA with respect to the EMF/EMF plume, Plant 2 or the LDW Site, including,
10 but not limited to, all sampling, analytical, monitoring, hydro-geologic, scientific, chemical, or
11 engineering data, or any other documents or information evidencing conditions at or around the
12 EMF.

13 **XI. RECORD RETENTION**

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15 29. Until 10 years after Respondent's receipt of EPA's notification pursuant to Section
16 XXVIII (Notice of Completion of Work), Respondent shall preserve and retain all non-identical
17 copies of records and documents (including records or documents in electronic form) now in its
18 possession or control or which come into its possession or control that relate in any manner to
19 the performance of the Work or the liability of any person under CERCLA with respect to the
20 EMF/EMF plume, Plant 2 or the LDW Site, regardless of any corporate retention policy to the
21 contrary. Until 10 years after Respondent's receipt of EPA's notification pursuant to Section
22 XXVIII (Notice of Completion of Work), Respondent shall also instruct their contractors and
23 agents to preserve all documents, records, and information of whatever kind, nature or
24 description relating to performance of the Work.

25 30. At the conclusion of this document retention period, Respondent shall notify EPA
26 and Ecology at least 90 days prior to the destruction of any such records or documents, and,

1 upon request by EPA or Ecology, Respondent shall deliver any such records or documents to
2 EPA. Respondent may assert that certain documents, records and other information are
3 privileged under the attorney-client privilege or any other privilege recognized by federal law.
4 If Respondent asserts such a privilege, it shall provide EPA and Ecology with the following:
5 1) the title of the document, record, or information; 2) the date of the document, record, or
6 information; 3) the name and title of the author of the document, record, or information; 4) the
7 name and title of each addressee and recipient; 5) a description of the subject of the document,
8 record, or information; and 6) the privilege asserted by Respondent. However, no documents,
9 reports or other information created or generated pursuant to the requirements of this Settlement
10 Agreement shall be withheld on the grounds that they are privileged.

11 31. Respondent hereby certifies that to the best of its knowledge and belief, after
12 reasonable inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of
13 any records, documents or other information (other than identical copies) relating to its potential
14 liability regarding the EMF/EMF plume, Plant 2 or the LDW Site since notification of potential
15 liability by EPA or Ecology or the filing of suit against it regarding the EMF/EMF plume and
16 that it has fully complied with any and all EPA requests for information pursuant to Sections
17 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA,
18 42 U.S.C. § 6927.

19 **XII. COMPLIANCE WITH OTHER LAWS**

20
21 32. Respondent shall perform all actions required pursuant to this Settlement Agreement
22 in accordance with all applicable local, state, and federal laws and regulations except as
23 provided in Section 121(e) of CERCLA, 42 U.S.C. § 6921(e), and 40 C.F.R. §§ 300.400(e) and
24 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all actions required pursuant to this
25 Settlement Agreement shall, to the extent practicable, as determined by EPA, considering the
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1 exigencies of the situation, attain applicable or relevant and appropriate requirements under
2 federal environmental, tribal environmental, or state environmental or facility siting laws.

3
4 **XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES**

5 33. In the event of any action or occurrence during performance of the Work which
6 causes or threatens to cause a release of Waste Material from the EMF/EMF plume that
7 constitutes an emergency situation or may present an immediate threat to public health or
8 welfare or the environment, Respondent shall immediately take all appropriate action.
9 Respondent shall take these actions in accordance with all applicable provisions of this
10 Settlement Agreement, in order to prevent, abate or minimize such release or endangerment
11 caused or threatened by the release. Respondent shall also immediately notify the EPA Project
12 Coordinator or, in the event of his/her unavailability, the Regional Duty Officer, Environmental
13 Cleanup Office, Emergency Response Unit, EPA Region X, 206-553-1263, of the incident or
14 conditions. In the event that Respondent fails to take appropriate response action as required by
15 this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of
16 the response action not inconsistent with the NCP pursuant to Section XV (Payment of
17 Response Costs).

18 34. In addition, in the event of any release of a hazardous substance from the EMF/EMF
19 plume, Respondent shall immediately notify the EPA Project Coordinator and the National
20 Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within
21 7 days after each release, setting forth the events that occurred and the measures taken or to be
22 taken to mitigate any release or endangerment caused or threatened by the release and to prevent
23 the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu
24 of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the
25 Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. §§ 11001, *et seq.*
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1 **XIV. AUTHORITY OF EPA PROJECT COORDINATOR**

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3 35. The EPA Project Coordinator shall be responsible for overseeing Respondent's
4 implementation of this Settlement Agreement. The Project Coordinator shall have the authority
5 vested in an On-Scene Coordinator (OSC) by the NCP, including the authority to halt, conduct,
6 or direct any Work required by this Settlement Agreement, or to direct any other removal action
7 undertaken at the EMF or for the EMF plume, as well as the authority of a Remedial Project
8 Manager (RPM) as set forth in the NCP. Absence of the EPA Project Coordinator from the
9 EMF shall not be cause for stoppage of work unless specifically directed by the EPA Project
10 Coordinator.

11 **XV. PAYMENT OF RESPONSE COSTS**

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13 36. Payments for Future Response Costs.

14 a. Respondent shall pay EPA all Future Response Costs not inconsistent with
15 the NCP. On a periodic basis, EPA will send Respondent a bill requiring payment that
16 includes a SCORPIOS or other regionally prepared cost summary, which includes direct and
17 indirect costs incurred by EPA and its contractors. Respondent shall make all payments
18 within 30 days of receipt of each bill requiring payment, except as otherwise provided in
19 Paragraph 39 of this Settlement Agreement.

20 b. Respondent shall make all payments required by this Paragraph by a
21 certified or cashier's check or checks made payable to "EPA Hazardous Substance
22 Superfund," referencing the name and address of the parties making payment, the Docket
23 Number of this Settlement Agreement, and EPA Site/Spill ID number 10EQ, and shall be
24 clearly designated as Response Costs: LDW-BEMF. Respondent shall send the check(s) to:

25 Mellon Bank
26 EPA-Region 10 Superfund
 P.O. Box 371099M

Pittsburgh, PA 15251

c. At the time of payment, Respondent shall send notice that payment has been made, as indicated in Paragraph 12 above, to the Servicing Finance Office, EPA Finance Center, MS-NWD, Cincinnati, OH 45268.

37. The total amount to be paid by Respondent pursuant to this Section shall be deposited in the Lower Duwamish Waterway Superfund Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the EMF or the LDW Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

38. If payments for Future Response Costs are not made within 30 days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of Respondent's receipt of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including, but not limited to, payment of stipulated penalties pursuant to Section XVIII.

39. Respondent may dispute all or part of a bill for Future Response Costs submitted under this Settlement Agreement, if Respondent alleges that EPA has made an accounting error, or if Respondent alleges that a cost item is inconsistent with the NCP. If any dispute over costs is resolved before payment is due, the amount due will be adjusted as necessary. If the dispute is not resolved before payment is due, Respondent shall pay the full amount of the uncontested costs to EPA as specified in this Section on or before the due date. Within the same time period, Respondent shall pay the full amount of the contested costs into an interest-bearing escrow account. Respondent shall simultaneously transmit a copy of both checks to the persons listed in this Section above, together with a copy of the correspondence that established and funds the escrow account, including, but not limited to, information containing the identity of

1 the bank and bank account under which the escrow account is established as well as a bank
2 statement showing the initial balance of the escrow account. Respondent shall ensure that the
3 prevailing party or parties in the dispute shall receive the amount upon which they prevailed
4 from the escrow funds plus interest within 10 days after the dispute is resolved.

5 6 **XVI. DISPUTE RESOLUTION**

7 40. Unless otherwise expressly provided for in this Settlement Agreement, the dispute
8 resolution procedures of this Section shall be the exclusive mechanism for resolving disputes
9 arising under this Settlement Agreement. The Parties shall attempt to resolve any
10 disagreements concerning this Settlement Agreement expeditiously and informally.

11 41. If Respondent objects to any EPA action taken pursuant to this Settlement
12 Agreement, including billings for Future Response Costs, it shall notify EPA in writing of its
13 objection(s) within 14 days of such action, unless the objection(s) has/have been resolved
14 informally. EPA and Respondent shall have 14 days from EPA's receipt of Respondent's
15 written objection(s) to resolve the dispute through formal negotiations (the Negotiation Period).
16 The Negotiation Period may be extended at the sole discretion of EPA.

17 42. Any agreement reached by the Parties pursuant to this Section shall be in writing and
18 shall, upon signature by both Parties, be incorporated into and become an enforceable part of
19 this Settlement Agreement. If the Parties are unable to reach an agreement within the
20 Negotiation Period, the Director of the EPA Region X Office of Air, Waste and Toxics (AWT
21 Director) will issue a written decision on the dispute to Respondent. EPA's decision shall be
22 incorporated into and become an enforceable part of this Settlement Agreement. Respondent's
23 obligations under this Settlement Agreement shall not be tolled by submission of any objection
24 for dispute resolution under this Section. Following resolution of the dispute, as provided by
25 this Section, Respondent shall fulfill the requirement that was the subject of the dispute in
26 accordance with the agreement reached or with EPA's decision, whichever occurs. Any written

1 statement of objections submitted by Respondent and any accompanying documentation shall
2 be retained by EPA in an Administrative Record at the written request of Respondent or at
3 EPA's discretion if there is no written retention request by Respondent.

4 **XVII. FORCE MAJEURE**

5
6 43. Respondent agrees to perform all requirements of this Settlement Agreement within
7 the time limits established under this Settlement Agreement, unless the performance is delayed
8 by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as
9 any event arising from causes beyond the control of Respondent, or of any entity controlled by
10 Respondent, including, but not limited to, their contractors and subcontractors, which delays or
11 prevents performance of any obligation under this Settlement Agreement despite Respondent's
12 best efforts to fulfill the obligation. *Force majeure* does not include financial inability to
13 complete the Work, increased cost of performance, or a failure to attain performance
14 standards/action levels selected by EPA.

15 44. If any event occurs or has occurred that may delay the performance of any obligation
16 under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent
17 shall notify EPA orally within 72 hours of when Respondent first knew that the event might
18 cause a delay. Within 10 days after the occurrence of the event, Respondent shall provide to
19 EPA in writing an explanation and description of the reasons for the delay; the anticipated
20 duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a
21 schedule for implementation of any measures to be taken to prevent or mitigate the delay or the
22 effect of the delay; Respondent's rationale for attributing such delay to a *force majeure* event if
23 it intends to assert such a claim, including supporting documentation for such a claim; and a
24 statement as to whether, in the opinion of Respondent, such event may cause or contribute to an
25 endangerment to public health, welfare or the environment. Failure to comply with the above
26 requirements shall preclude Respondent from asserting any claim of *force majeure* for that

1 event for the period of time of such failure to comply and for any additional delay caused by
2 such failure.

3 45. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure*
4 event, the time for performance of the obligations under this Settlement Agreement that are
5 affected by the *force majeure* event will be extended by EPA for such time as is necessary to
6 complete those obligations. An extension of the time for performance of the obligations
7 affected by the *force majeure* event shall not, of itself, extend the time for performance of any
8 other obligation. If EPA does not agree that the delay or anticipated delay has been or will be
9 caused by a *force majeure* event, EPA will notify Respondent in writing of its decision. If EPA
10 agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondent in
11 writing of the length of the extension for performance of the obligations affected by the *force*
12 *majeure* event.

13 XVIII. STIPULATED PENALTIES

14
15 46. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in
16 this Section for failure to comply with the requirements of this Settlement Agreement specified
17 below, unless excused under Section XVII (*Force Majeure*). "Compliance" by Respondent
18 shall include completion of the activities under this Settlement Agreement or any work plan or
19 other plan approved under this Settlement Agreement identified below in accordance with all
20 applicable requirements of law, this Settlement Agreement, all Appendices, and any plans or
21 other documents approved by EPA pursuant to this Settlement Agreement and within the
22 specified time schedules established by and approved under this Settlement Agreement.

23 47. Stipulated Penalty Amounts - Work.

24 a. The following stipulated penalties shall accrue per violation per day for any
25 noncompliance identified in Paragraph 47(b):
26

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,000	1st through 7th day
\$ 2,000	8th through 14th day
\$ 3,500	15th through 30th day
\$ 7,500	31st day through 90th day

b. The final and all submitted drafts of Compliance Milestones a through d below, and completion of field Work in a manner specified in any approved work plan:

- a. Initial Report (see SOW)
- b. Data Gap Sampling Work Plan/Quality Assurance Project Plan
- c. Investigation data Summary Report
- d. Engineering Evaluation/Cost Analysis
- e. Final Removal Action Correction of Deficiencies Report (if any).

48. Stipulated Penalty Amounts - Reports. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate final and all submitted draft reports or other written documents pursuant to this Settlement Agreement that are not listed in Paragraph 47(b):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500	1st through 7th day
\$ 1,000	8th day through 14th day
\$ 2,500	15th through 30th day
\$ 5,000	31st day through 90th day

49. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: 1) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and 2) with respect to a decision by the AWT Director under Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the AWT Director issues a final decision regarding such dispute.

1 50. Nothing herein shall prevent the simultaneous accrual of separate penalties for
2 separate violations of this Settlement Agreement.

3 51. Following EPA's determination that Respondent has failed to comply with a
4 requirement of this Settlement Agreement, EPA shall give Respondent written notification of
5 the failure and describe the noncompliance. EPA may send Respondents a written demand for
6 payment of the penalties. However, penalties shall accrue as provided in the preceding
7 Paragraph regardless of when EPA has notified Respondents of a violation.

8 52. All stipulated penalties accruing under this Section shall be due and payable to EPA
9 within 30 days of Respondent's receipt from EPA of a demand for payment of the penalties,
10 unless Respondent invokes the dispute resolution procedures under Section XVI (Dispute
11 Resolution). All payments to EPA under this Section shall be paid by certified or cashier's
12 check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to the
13 Lockbox number and address set forth in Paragraph 36b, above, shall indicate that the payment
14 is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID Number 10EQ,
15 the EPA Docket Number of this Settlement Agreement, and the name and address of the parties
16 making payment. Copies of check(s) paid pursuant to this Section, and any accompanying
17 transmittal letter(s), shall be sent to EPA as provided in Paragraph 12, and to other receiving
18 officials at EPA identified in Paragraph 36c, above.

19 53. The payment of penalties shall not alter in any way Respondent's obligation to
20 complete performance of the Work required under this Settlement Agreement. Penalties shall
21 continue to accrue during any dispute resolution period, but need not be paid until 15 days after
22 the dispute is resolved by agreement or by receipt of EPA's decision.

23 54. If Respondent fails to pay stipulated penalties when due, EPA may institute
24 proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the
25 unpaid balance, which shall begin to accrue on the date of demand made pursuant to this
26 Section.

1 55. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or
2 in any way limiting the ability of EPA to seek any other remedies or sanctions available by
3 virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations
4 upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and
5 122(l) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(l), and punitive damages pursuant to
6 Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not
7 seek civil penalties pursuant to Section 106(b) or 122(l) of CERCLA or punitive damages
8 pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is
9 provided herein, except in the case of a willful violation of this Settlement Agreement or in the
10 event that EPA assumes performance of a portion or all of the Work pursuant to Section XX,
11 Paragraph 59. Notwithstanding any other provision of this Section, EPA may, in its
12 unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to
13 this Settlement Agreement.

14
15 **XIX. COVENANT NOT TO SUE BY EPA**

16 56. In consideration of the actions that will be performed and the payments that will be
17 made by Respondent under the terms of this Settlement Agreement, and except as otherwise
18 specifically provided in this Settlement Agreement, EPA covenants not to sue or to take
19 administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42
20 U.S.C. §§ 9606 and 9607(a), for the Work and for Future Response Costs. This covenant not to
21 sue shall take effect upon the Effective Date and is conditioned upon the complete and
22 satisfactory performance by Respondent of all obligations under this Settlement Agreement,
23 including, but not limited to, payment of Future Response Costs pursuant to Section XV. This
24 covenant not to sue extends only to Respondent and does not extend to any other person.
25
26

1 **XX. RESERVATIONS OF RIGHTS BY EPA**

2
3 57. Except as specifically provided in this Settlement Agreement, nothing herein shall
4 limit the power and authority of EPA or the United States to take, direct, or order all actions
5 necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize
6 an actual or threatened release of hazardous substances, pollutants or contaminants, or
7 hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA
8 from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from
9 taking other legal or equitable action as it deems appropriate and necessary, or from requiring
10 Respondent in the future to perform additional activities pursuant to CERCLA or any other
11 applicable law.

12 58. The covenant not to sue set forth in Section XIX above does not pertain to any
13 matters other than those expressly identified therein. EPA reserves, and this Settlement
14 Agreement is without prejudice to, all rights against Respondent with respect to all other
15 matters, including, but not limited to:

- 16 a. claims based on a failure by Respondent to meet a requirement of this
17 Settlement Agreement;
18 b. liability for costs not included within the definition of Future Response
19 Costs;
20 c. liability for performance of response action other than the Work;
21 d. criminal liability;
22 e. liability for damages for injury to, destruction of, or loss of natural
23 resources, and for the costs of any natural resource damage assessments;
24 f. liability arising from the past, present, or future disposal, release or threat
25 of release of Waste Materials outside of the EMF/EMF plume; and
26

1 g. liability for costs incurred or to be incurred by the Agency for Toxic
2 Substances and Disease Registry related to the EMF/EMF plume.

3 59. Work Takeover. In the event EPA determines that Respondent has ceased
4 implementation of any portion of the Work, is seriously or repeatedly deficient or late in its
5 performance of the Work, or is implementing the Work in a manner which may cause an
6 endangerment to human health or the environment, EPA may assume the performance of all or
7 any portion of the Work as EPA determines necessary. Respondent may invoke the procedures
8 set forth in Section XVI (Dispute Resolution) to dispute EPA's determination that takeover of
9 the Work is warranted under this Paragraph. Costs incurred by the United States in performing
10 the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondent
11 shall pay pursuant to Section XV (Payment of Response Costs). Notwithstanding any other
12 provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take
13 any and all response actions authorized by law.

14 **XXI. COVENANT NOT TO SUE BY RESPONDENT**

15
16 60. Respondent covenants not to sue and agrees not to assert any claims or causes of
17 action against EPA, or its contractors or employees, with respect to the Work, Future Response
18 Costs, or this Settlement Agreement, including, but not limited to:

19 a. any direct or indirect claim for reimbursement from the Hazardous
20 Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111,
21 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other
22 provision of law;

23 b. any claim arising out of response actions at or in connection with the
24 EMF/EMF plume, including any claim under the United States Constitution, the Washington
25 State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28
26 U.S.C. § 2412, as amended, or at common law; or

1 c. any claim against EPA pursuant to Sections 107 and 113 of CERCLA, 42
2 U.S.C. §§ 9607 and 9613, relating to the EMF/EMF plume. The covenants not to sue in this
3 section shall not apply in the event the United States brings a cause of action or issues an
4 order pursuant to the reservations set forth in Paragraphs 58 (b), (c), and (e) - (g), but only to
5 the extent that Respondent's claims arise from the same response action, response costs, or
6 damages that the United States is seeking pursuant to the applicable reservation.

7 61. Nothing in this Agreement shall be deemed to constitute approval or
8 preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611,
9 or 40 C.F.R. § 300.700(d).

10 **XXII. OTHER CLAIMS**

11
12 62. By issuance of this Settlement Agreement, the United States and EPA assume no
13 liability for injuries or damages to persons or property resulting from any acts or omissions of
14 Respondent. The United States or EPA shall not be deemed a party to any contract entered into
15 by Respondent or its directors, officers, employees, agents, successors, representatives, assigns,
16 contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

17 63. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA),
18 nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or
19 cause of action against Respondent or any person not a party to this Settlement Agreement, for
20 any liability such person may have under CERCLA, other statutes, or common law, including,
21 but not limited to, any claims of the United States for costs, damages and interest under Sections
22 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

23 64. No action or decision by EPA pursuant to this Settlement Agreement shall give rise
24 to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C.
25 § 9613(h).
26

1 **XXIII. CONTRIBUTION**

2
3 65. The Parties agree that:

4 a. This Settlement Agreement constitutes an administrative settlement for
5 purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondent is
6 entitled, as of the Effective Date, to protection from contribution actions or claims as provided
7 by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for
8 "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement
9 Agreement are the Work and Future Response Costs.

10 b. This Settlement Agreement constitutes an administrative settlement for
11 purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which
12 Respondent has, as of the Effective Date, resolved its liability to the United States for the
13 Work and Future Response Costs.

14 c. Nothing in this Settlement Agreement precludes the United States or
15 Respondent from asserting any claims, causes of action, or demands for indemnification,
16 contribution, or cost recovery against any persons not parties to this Settlement Agreement.
17 Nothing herein diminishes the right of the United States, pursuant to Sections 113(f)(2) and
18 (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional
19 response costs or response action and to enter into settlements that give rise to contribution
20 protection pursuant to Section 113(f)(2).

21 66. Respondent agrees that with respect to any suit or claim for contribution brought by
22 them for matters related to this Settlement Agreement, it will notify EPA in writing no later than
23 60 days prior to the initiation of such suit or claim. Respondent further agree that with respect
24 to any suit or claim for contribution brought against it for matters related to this Settlement
25 Agreement, it will notify EPA in writing within 10 days of service of the complaint on them. In
26 addition, Respondent shall notify EPA within 10 days of service or receipt of any Motion for

1 Summary Judgment and within 10 days of receipt of any order from a court setting a case for
2 trial.

3 67. In any subsequent administrative or judicial proceeding initiated by the United States
4 for injunctive relief, recovery of response costs, or other appropriate relief relating to the
5 EMF/EMF plume or this Settlement Agreement, Respondent shall not assert, and may not
6 maintain, any defense or claim based upon the principles of waiver, res judicata, collateral
7 estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the
8 claims raised by the United States in the subsequent proceeding should have been addressed in
9 this Settlement Agreement; provided, however, that nothing in this Paragraph affects the
10 enforceability of the covenants not to sue set forth in this Settlement Agreement.

11 **XXIV. INDEMNIFICATION**

12
13 68. Respondent shall indemnify, save and hold harmless the United States, its officials,
14 agents, contractors, subcontractors, employees and representatives from any and all claims or
15 causes of action arising from, or on account of, negligent or other wrongful acts or omissions of
16 Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying
17 out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the
18 United States all costs incurred by the United States, including, but not limited to, attorneys fees
19 and other expenses of litigation and settlement, arising from or on account of claims made
20 against the United States based on negligent or other wrongful acts or omissions of Respondent,
21 its officers, directors, employees, agents, contractors, subcontractors and any persons acting on
22 their behalf or under their control, in carrying out activities pursuant to this Settlement
23 Agreement. The United States shall not be held out as a party to any contract entered into by or
24 on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement.
25 Neither Respondent nor any such contractor shall be considered an agent of the United States.
26

69. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

70. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the EMF/EMF plume, including, but not limited to, claims on account of construction delays. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the EMF/EMF plume, including, but not limited to, claims on account of construction delays.

XXV. INSURANCE

71. At least 7 days prior to commencing any field Work under this Settlement Agreement, Respondent shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of five million dollars, combined single limit. Within the same time period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an

1 equal or lesser amount, then Respondent need provide only that portion of the insurance
2 described above which is not maintained by such contractor or subcontractor.

3 4 **XXVI. FINANCIAL ASSURANCE**

5 72. Within 30 days of the Effective Date and on the anniversary of the Effective Date
6 every year thereafter until Notice of Completion of Work in accordance with Section XXVIII
7 below is received from EPA, Respondent shall establish and maintain financial security in the
8 amount of \$1,000,000.00 to assure the Work and any other obligations required under this
9 Settlement Agreement in one or more of the following forms:

- 10 a. A surety bond guaranteeing performance of the Work;
11 b. One or more irrevocable letters of credit equaling the total estimated cost of
12 the Work;
13 c. A trust fund;
14 d. A guarantee to perform the Work by one or more parent corporations or
15 subsidiaries, or by one or more unrelated corporations that have a substantial business
16 relationship with Respondent; or
17 e. A demonstration that Respondent satisfies the requirements of 40 C.F.R.
18 Part 264.143(f).

19 73. If Respondent seeks to demonstrate the ability to complete the Work through a
20 guarantee by a third party pursuant to Paragraph 72(a) of this Section, Respondent shall
21 demonstrate that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f). If
22 Respondent seeks to demonstrate its ability to complete the Work by means of the financial test
23 or the corporate guarantee pursuant to Paragraph 72(d) or (e) of this Section, it shall resubmit
24 sworn statements conveying the information required by 40 C.F.R. 264.143(f) annually, on the
25 anniversary of the Effective Date. In the event that EPA determines at any time that the
26 financial assurances provided pursuant to this Section are inadequate, Respondent shall, within

1 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one
2 of the other forms of financial assurance listed in Paragraph 72 of this Section. Respondent's
3 inability to demonstrate financial ability to complete the Work shall not excuse performance of
4 any activities required under this Settlement Agreement.

5 74. If, after the Effective Date, Respondent can show that the estimated cost to complete
6 the remaining Work has diminished below \$1,000,000.00, Respondent may, on any anniversary
7 date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of
8 the financial security provided under this Section to the estimated cost of the remaining Work to
9 be performed. Respondent shall submit a proposal for such reduction to EPA, in accordance
10 with the requirements of this Section, and may reduce the amount of the security upon approval
11 by EPA. In the event of a dispute, Respondent may reduce the amount of the security in
12 accordance with the written decision resolving the dispute.

13 75. Respondent may change the form of financial assurance provided under this Section
14 at any time, upon notice to and approval by EPA, provided that the new form of assurance
15 meets the requirements of this Section. In the event of a dispute, Respondent may change the
16 form of the financial assurance only in accordance with the written decision resolving the
17 dispute.

18 **XXVII. MODIFICATIONS**

19
20 76. The EPA Project Coordinator may make modifications to any plan and may extend
21 the existing schedule in writing or by oral direction. Any oral modification will be
22 memorialized in writing by EPA promptly, but shall have as its effective date the date of the
23 EPA Project Coordinator's oral direction. Any other requirements of this Settlement
24 Agreement may be modified in writing by mutual agreement of the Parties.

25 77. If Respondent seeks permission to deviate from any approved work plan or schedule
26 or Statement of Work, Respondent's Project Coordinator shall submit a written request to EPA

1 for approval outlining the proposed modification and its basis. Respondent may not proceed
2 with the requested deviation until receiving oral or written approval from the EPA Project
3 Coordinator pursuant to Paragraph 76.

4 78. No informal advice, guidance, suggestion, or comment by the EPA Project
5 Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or
6 any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain
7 any formal approval required by this Settlement Agreement, or to comply with all requirements
8 of this Settlement Agreement, unless it is formally modified.

9 10 **XXVIII. NOTICE OF COMPLETION OF WORK**

11 79. When EPA determines, after EPA's review of the EE/CA, as required by the SOW,
12 that all Work has been fully performed in accordance with this Settlement Agreement, with the
13 exception of any continuing obligations required by this Settlement Agreement, including
14 payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA
15 determines that any such Work has not been completed in accordance with this Settlement
16 Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that
17 Respondent correct such deficiencies. Respondent shall perform all necessary Work to correct
18 the deficiencies in accordance with the EPA written notice and shall submit a Final Removal
19 Action Correction of Deficiencies Report within 30 days of receipt of EPA's written notice
20 Failure by Respondent to correct the deficiencies and timely submit Final Removal Action
21 Correction of Deficiencies Report shall be a violation of this Settlement Agreement.

22 23 **XXIX. SEVERABILITY/INTEGRATION/APPENDICES**

24 80. If a court issues an order that invalidates any provision of this Settlement Agreement
25 or finds that Respondent has sufficient cause not to comply with one or more provisions of this
26 Settlement Agreement, Respondent shall remain bound to comply with all provisions of this

1 Settlement Agreement not invalidated or determined to be subject to a sufficient cause defense
2 by the court's order.

3 81. This Settlement Agreement and its appendices constitute the final, complete and
4 exclusive agreement and understanding among the Parties with respect to the settlement
5 embodied in this Settlement Agreement. The Parties acknowledge that there are no
6 representations, agreements or understandings relating to the settlement other than those
7 expressly contained in this Settlement Agreement. In interpreting this Settlement Agreement,
8 any inconsistencies between it and any appendices shall be resolved in favor of this Settlement
9 Agreement. The following appendices are attached to and incorporated into this Settlement
10 Agreement:

- 11 a. Appendix A: Statement of Work.
- 12 b. Appendix B: Map generally depicting the EMF.

13 **XXX. EFFECTIVE DATE**

14
15 82. This Settlement Agreement shall be effective on the day it is issued by EPA. The
16 undersigned representative of Respondent certifies that s/he is fully authorized to enter into this
17 Settlement Agreement and to bind Respondent to the terms and conditions herein.

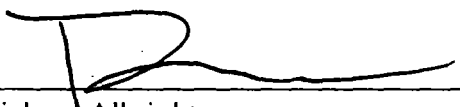
18 **XXXI. NOTICES AND SUBMISSIONS**

19
20 83. Documents including work plans, reports, approvals, disapprovals, and other
21 correspondence which must be submitted under this Settlement Agreement, shall be sent to the
22 individuals at the addresses specified below, unless those individuals give written notice of a
23 change to the other parties. All notices and submissions shall be considered effective one
24 business day after receipt by Respondent's Project Coordinator, unless otherwise provided.
25 Upon request by EPA, Respondent shall submit such documents in electronic form.

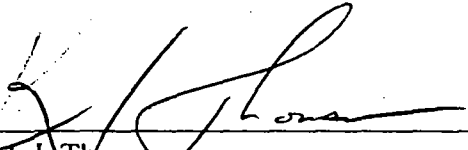
26 Six (6) copies of documents submitted to EPA shall be forwarded to:

1 Laura Castrilli
2 U.S. Environmental Protection Agency
3 1200 Sixth Avenue, AWT-121
4 Seattle, Washington 98101

5 It is so ORDERED and AGREED.

6
7 By  Date 2/2/07
8 Richard Albright
9 AWT Director
U.S. EPA, Region X

1 For Respondent The Boeing Company:

2
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4 By  Date 1-26-07
5 Kirk J. Thomson
6 Director of Environmental Affairs
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"Bach, Carl M"
<carl.m.bach@boeing.com>
03/06/2007 07:31 AM

To: Laura Castrilli/R10/USEPA/US@EPA
cc: Charles Ordine/R10/USEPA/US@EPA
bcc:
Subject: RE: Boeing EMF SOW

Thanks Laura.
We will use your copy of the final EMF SOW.

-----Original Message-----

From: Castrilli.Laura@epamail.epa.gov
[mailto:Castrilli.Laura@epamail.epa.gov]
Sent: Monday, March 05, 2007 4:05 PM
To: Bach, Carl M
Cc: Ordine.Charles@epamail.epa.gov
Subject: Boeing EMF SOW

During internal discussion we realized that Charlie and I had different electronic versions of what we believed to be the final SOW for the EMF Settlement Agreement. Charlie forwarded a hard copy of the executed Settlement Agreement to Paul Carlson which may have inadvertently had an earlier version of the SOW attached to it (Charlie can't recall if the mailing included a SOW & he called Paul who did not recall off hand). Charlie believes he named the wrong electronic version as final & deleted his other versions from his computer including the actual final version below. Attached is the actual final version of the SOW. Please review it and let me know if you have any disagreement with it as the final version. We're sorry, Charlie especially, for this confusion.

To be as transparent here as possible, I created this file by saving the electronic version of the SOW I sent to you on December 18, 2006 at 7:41 a.m.* and am now giving this saved version the new name: BEMF EECA SOW final.doc.

* The time for my 12/18 e-mail came back as 7:42 in the history of your initial response on 12/20 at 2:59 p.m. and your final response on 1/10 at 9:05 a.m.

Here is my "redline removed" file originally sent on 12/18 (from a redlined draft of 11/21) consistent with my internal naming process:

(See attached file: emfsowdraftrev11-21redlinereMOVED.doc)

Here is the final with the file name changed to show it as final:

(See attached file: BEMF EECA SOW final.doc)

Laura Castrilli
castrilli.laura@epa.gov
(206) 553-4323; MS: AWT-121
7:30-6:00 Mon-Thur

STATEMENT OF WORK

INVESTIGATION AND PREPARATION OF ENGINEERING EVALUATION/COST ANALYSIS FOR BOEING ELECTRONICS MANUFACTURING FACILITY

I. INTRODUCTION

The purpose of this Statement of Work (SOW) is to outline the general requirements to complete an investigation and preparation of an Engineering Evaluation/Cost Analysis (EE/CA) by The Boeing Company (Respondent) to address releases of hazardous substances at or from the Boeing Electronics Manufacturing Facility ("EMF or Site") located at 7355 Perimeter Road South, Seattle, WA. The SOW Task 3 and Task 4 will be organized to follow the standard Data Quality Objectives (DQO) process contained in EPA DQO guidance. In general, the objectives of the investigation and EE/CA described in this SOW are to determine the nature and extent of contamination, particularly in groundwater, and to analyze alternatives to address the contamination as necessary.

The work under this SOW will be conducted in three phases. The first phase will include a summary of existing data, historical operations, Site configuration, and delineation of potential sources to identify specific data gaps that may need to be addressed by further sampling and analysis. The second phase may involve preparation/delivery of a data gap sampling work plan(s) and subsequent report(s). The third phase will be the preparation of the EE/CA. These phases of work are described in Tasks 2 through 4 below.

II. TASKS

TASK 1 – COMMUNICATION AND MEETING

This task delineates the requirements for the Respondent and the Environmental Protection Agency, Region 10 (EPA) to manage the three phases of this investigation and for the Respondent to provide communication with the EPA in a timely and consistent manner. This task will include, but not be limited to, the following:

- Preparation of a written project schedule for the three phases of the investigation.
- Regularly scheduled meetings and/or conference calls between the Respondent and EPA.
- Preparation of progress reports submitted to EPA in accordance with the schedule in Section III of this SOW. At a minimum, progress reports shall contain the following information regarding the preceding reporting period:
 - A description of the actions which have been taken to comply with the Settlement Agreement (including the SOW) during the previous reporting period;
 - Summaries of new findings;
 - Summaries of all deviations from any approved Work Plan, Sampling and Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP);
 - Summaries of all difficulties or anticipated difficulties in meeting the schedule or objectives set forth in the SOW and Work Plan;

- Summaries of all solutions developed or planned (or implemented or initiated in exigent circumstances) to address any actual or anticipated problems or delays;
 - Changes in key personnel;
 - A description of all work planned for the next reporting period with schedules relating such work to the overall project schedule, including percentage of completion data; and
 - A list of sampling and testing reports and all other final data reports received by Respondent other than those generated pursuant to this Settlement Agreement which relate in any way to the EMF/EMF plume.
- Notification to EPA of impending field activities at least 7 days prior to field activities. This will allow EPA to determine whether oversight of any field activities will occur.
 - Distribution of deliverables. When modifying deliverables in accordance with EPA revisions or modifications, Respondent shall provide a redline version of the revised deliverables and, if requested by EPA, shall also provide a written response to each revision or modification, indicating how and where the revision or modification was addressed.

TASK 2 – SUMMARY OF AVAILABLE INFORMATION AND WORK OR EFFORTS TO DATE TO ADDRESS RELEASES

A number of reports have been prepared to date for the EMF/EMF Plume for the Model Toxics Control Act (MTCA) Voluntary Cleanup Program (VCP). To the extent any such reports are cited, copies of such reports shall be provided to EPA by Boeing. Available information will be compiled, as appropriate and necessary, to identify potential sources of releases of hazardous substances from current or historic operations at or from the Site, including groundwater thereunder or therefrom; to define potential contaminant pathways to the Duwamish Waterway; to present the conceptual hydrogeologic model; and to identify data gaps. The objectives of this task is to summarize the chronological history of the project and provide sufficient information (by referencing the existing reports) to develop the conceptual hydrogeologic model and identify data gaps. This summary will be presented in an Initial Report; the Initial Report is not intended to re-write the existing reports, but to clearly present, summarize, and reference the existing reports that comprise the Ecology record for the voluntary cleanup. A plan for addressing data gaps will be presented in the Data Gap Work Plan (Task 3) and will form the basis for additional investigations.

The information to be reviewed and evaluated, to the extent available, will include the following:

- Location and description of the Site.
- Site and surrounding area history.

- Current and reasonably anticipated future land use(s).
- Compilation and assessment of physical and chemical characterization data for:
 - Groundwater;
 - Soil;
 - Pore water;
 - Soil gas above the plume;
 - Stormwater from the Site;
 - Surface and subsurface sediment quality, grain size distribution, and total organic carbon (where applicable to the EMF VOC plume).
- Location, description, and elevation of historical and existing stormwater discharges originating from the Site.
- Delineation of Site outfall drainage areas.
- Structure locations (e.g. buildings, historical building footprints, runways).
- Available survey coordinates from past studies or other efforts (e.g. sediment, groundwater, and soil sample stations and locations).
- Current and historical aerial photograph review.
- Review of existing source data:
 - Summary of Boeing records including existing data reports, investigative reports, technical memorandums and listing of available Washington Department of Ecology records related to the Site;
 - Summary of the response actions taken to date;
 - Review of other potential sources within the vicinity of the Site, which may have impacted the Site or commingled with Site contaminants;
- Interviews with key personnel, if available, that have worked at the Site.
- Identification of potential historical and ongoing significant sources to the LDW from the Site.

The conceptual hydrogeologic model shall include a visual depiction of the site in 3 dimensions (cross sections are good) and provide 1) a spatial relationship of the major environmental features (topography, surface water, groundwater aquifers/aquitards, etc.); 2) sources of contamination (spill areas, USTs, landfills, ponds, etc); and 3) at least some general indication of contaminant flow paths, both horizontal and vertical.

TASK 3 – DATA GAP SAMPLING WORK PLAN AND REPORT

The work required to complete the investigation of the nature and extent of contamination, particularly of releases to groundwater, is not fully known at this time. This task may have to be phased or sequenced in accordance with data needs and/or site conditions following Task 2 of the SOW, and it may include environmental sampling of selected media for specific contamination to fill data gaps. This step may be omitted if EPA concludes (in writing) based on the Initial Report submitted under Task 2 that the nature and extent of the plume has been fully delineated. Boeing currently has MTCA VCP efforts in progress for specific locations within the EMF Plume, which EPA has not yet reviewed, to address the known plume.

The Respondent shall submit for EPA review and Approval a Data Gap Sampling Work Plan (DGSWP) after the Initial Report has been completed, as defined in Task 2 of this SOW. The DGSWP shall summarize the results of the Initial Report, including the identification of any data gaps and the conceptual site model, and make a determination that the Site, is, or is not, a historical and/or current source of contamination to the sediment or surface water of the LDW. The DGSWP will define the location, depth, media to be sampled, and the sampling and analytical methods to be utilized to fill the data gaps. Attachments to the DGSWP shall include a SAP, QAPP, and a Health and Safety Plan (HASP).

The DGSWP shall specify key tasks to be accomplished to complete the investigation of the Site. The DGSWP shall clearly describe the overall management strategy for planning, performing, and documenting investigative activities. The responsibility and authority of all organizations and key personnel involved in performing investigative tasks shall be outlined. The DGSWP shall discuss the timing/schedule for all subsequent related documents or activities described in Section III of this SOW.

Elements of the DGSWP will include, but not be limited to, the following:

- A summary of the information review completed under Task 2.
- A data gap analysis that defines the known or suspected sources of contamination, the potential pathways for contaminant migrations, and areas where sampling and analysis will be necessary to address the data gaps regarding nature and extent of contamination identified at the Site.
- A Project Management strategy, describing the strategy for managing investigative activities and achieving timely submittal of deliverables.
- A project schedule, including a timeline for completion of all investigative subtasks and for submittal to EPA of interim and final deliverables, including but not limited to the deliverables enumerated in Table 1 of this SOW.

- The composition and individual qualifications of technical team or teams of personnel and/or subcontractors responsible for investigative subtasks.
- Listing of standards, criteria, and regulations applicable to the investigation.
- A Data Management Plan:
 - A unique identification code assigned to all monitoring and sampling stations;
 - Location data and descriptive information recorded and encoded of all monitoring and sampling stations described in standard latitude and longitude coordinates or state plane coordinates;
 - Analytical results and other observations correlated with the sampling station location and descriptive code using common identification codes assigned to station locations.
- A list and description of individual investigative activities necessary to address data gaps that may include:
 - Site survey:
 - Location, description, and elevation of historical and existing outfalls associated with the Site.
 - Physical Characterization, including:
 - Groundwater chemistry, flow direction and flux and the effects of EMF plume contaminated groundwater discharge on the Duwamish Waterway;
 - Sources and discharge points for storm and surface water from the Site;
 - Receiving water chemistry, currents and sediment transport (where applicable to the EMF plume contaminated groundwater discharge).
 - Environmental Media Sampling, including:
 - Soil sampling;
 - Surface and subsurface sediment samples (where applicable to the EMF plume contaminated groundwater discharge);
 - Groundwater sampling.

Physical characterization of groundwater chemistry and hydrogeologic conditions including effects relative to the Duwamish Waterway have been and will be investigated as part of the Plant 2 January 1994 Resource Conservation Recovery Act (RCRA) Corrective Action Order (RCRA Order). This information will be used to evaluate potential data gaps relative to the EMF plume. Surface and subsurface sediment sampling and investigations along the shoreline relating to the EMF plume will be conducted as part of the Plant 2 RCRA Order process in order to fully characterize the

EMF plume relative to possible sources and risks of like contaminants originating from Plant 2.

Samples collected pursuant to the Plant 2 RCRA Order relating to the EMF Plume will be collected, analyzed and reported on in a manner equivalent to samples collected pursuant to this Settlement Agreement, and vice versa for samples collected on Plant 2 property pursuant to this Settlement Agreement.

The DGSWP will be submitted to EPA in draft format for review and revision or modification. Following satisfactory incorporation of EPA revision(s) or modification(s), the Final DGSWP, with the schedules for performance of related activities and submission of deliverables, shall be incorporated into this SOW by reference and shall be implemented in accordance with the approved schedule.

A) Sampling and Analysis Plan

Respondent shall submit to EPA a SAP for review and approval in accordance with the document submittal schedule set forth in Section III of this SOW. The purpose of the SAP is to provide the specifics of the data gap sampling program and to obtain the necessary information needed to fill the data gaps summarized in the DGSWP.

The SAP shall describe the sampling objectives, the rationale for the sampling approach (based in part on the data gaps identified during the summary of existing data) and plans for data use, and shall provide a detailed description of sampling tasks, consistent with EPA standard methods, ASTM International (originally known as the American Society for Testing and Materials or ASTM) methods, Puget Sound Estuary Program (PSEP), or other protocols, as applicable. The SAP shall describe specifications for sample identifiers; operation of major sampling equipment (e.g. drilling equipment); the type, number, and location of samples to be collected; the analyses to be performed; descriptions of sampling gear and methods to be used; documentation of samples; sample containers, collection and handling; and the sampling schedule.

The SAP shall describe the data quality objectives (DQOs), and identify and describe measures that will be taken during performance of all sampling and analysis tasks to ensure fulfillment of the DQOs. DQOs will reflect criteria or threshold values used for potential future remedial decisions.

B) Quality Assurance Project Plan

Respondent shall submit to EPA a QAPP for investigation sampling and analysis activities for review and approval by EPA in accordance with the document submittal schedule set forth in Section III of this SOW. DQOs will reflect the criteria or threshold values used for potential future remedial decisions. The QAPP shall be prepared in accordance with EPA Requirements for Quality Assurance Project Plans (QA/R-5), March 2001 (Reissued May 2006),

EPA/240/B-01/003; and EPA Guidance for Preparation of Quality Assurance Project Plans, EPA/240/R-02/009, December 2002, QA/G-5 and in accordance with the requirements of the EPA Contract Laboratory Program (CLP – OLC03.2 or OLM04.3 or more recent statement of work for organic analysis) and shall contain the following elements:

- Title and Approval Sheet
- Table of Contents
- Distribution List
- Project/Task Organization
- Problem Definition/Background
- Project/Task Description
- Quality Objectives and Criteria for Measurement Data
- Special Training Needs/Certification
- Documents and Records
- Sampling Process Design (Experimental Design)
- Sampling Methods
- Sample Handling and Custody
- Analytical methods (including parameters, preparation and analysis methods, reporting limits, and volume of sample required for each matrix)
- Quality Control (including number/type of quality control samples, spikes and replicates required)
- Instrument/Equipment Testing, Inspection, and Maintenance
- Instrument/Equipment Calibration and Frequency
- Inspection/Acceptance of Supplies and Consumables
- Non-direct Measurements
- Data Management
- Assessments and Response Actions
- Reports to Management
- Data Review, Verification, and Validation
- Verification and Validation Methods
- Reconciliation with User Requirements

Where some of the QAPP information overlaps with the information required in the SAP, references to the appropriate section(s) of the SAP may be made in the QAPP.

C) Health and Safety Plan

Respondent shall submit to EPA a HASP for investigation sampling and analysis activities in accordance with the document submittal schedule set forth in Section III of this SOW. The HASP must be consistent with the requirements of CERCLA, the Occupational Safety and Health Administration (OSHA), and the Washington Safety and Health Administration (WSHA). The HASP shall identify specific monitoring and management responsibilities and activities to ensure the protection of human health and to promote safety for the activities

associated with investigation sampling. The HASP shall be modified as necessary for changes or revisions to the SAP and QAPP.

In accordance with the document submittal schedule set forth in Section III of this SOW, prior to preparation of the Engineering Evaluation and Cost Analysis, the Respondent shall submit to EPA an Investigation Data Summary Report including all data from investigations conducted during this task. The schedule for submittal of the Investigation Data Summary Report is dependent upon whether additional sampling is needed. The data shall also be submitted in electronic format such as Excel or similar spreadsheet software.

All data submitted to EPA must be of known and documented quality. Respondent will be responsible for ensuring and monitoring the quality of the data obtained from its contract laboratory.

EPA reserves the right to reject or qualify any data not generated/collected in accordance with the Settlement Agreement.

TASK 4 – ENGINEERING EVALUATION AND COST ANALYSIS

In accordance with the document submittal schedule set forth in Section III of this SOW, the Respondent shall submit to EPA an Engineering Evaluation and Cost Analysis (EE/CA) Report for EPA review.

At a minimum, the EE/CA must include the following information/topics. Information may be included by references to specific reports but shall include sufficient summary of salient points, and may include data derived pursuant to the Plant 2 RCRA Order that is applicable to the EMF EE/CA). Additional information/topics may also be added.

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List of Acronyms

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 - 2.1. Site location and description (short version)
 - 2.2. Overview of EMF cleanup activities
 - 2.2.1. Statutory basis for action
 - 2.3. Previously prepared documents and environmental investigations
3. Site characterization
 - 3.1. Site location and description (long version)
 - 3.2. Demographic setting

- 3.3. Site geology and hydrogeology
- 3.4. Topography
- 3.5. History
- 3.6. Nature and extent of contamination
 - 3.6.1. Soil
 - 3.6.2. Groundwater
- 3.7. Previous removal actions
 - 3.7.1. Groundwater extraction/treatment
 - 3.7.2. Contaminated soil removal
- 3.8. Risk evaluation
- 4. Removal action goals and objectives
 - 4.1. Removal action schedule
 - 4.2. Applicable or relevant and appropriate requirements
 - 4.3. Interim cleanup level goals
- 5. Identification and analysis of removal action alternatives
 - 5.1. Development of removal action alternatives
 - 5.1.1. No action
 - 5.1.2. In-situ air sparging with soil vapor extraction
 - 5.1.3. In-well stripping with soil vapor extraction
 - 5.1.4. Enhanced reductive dechlorination
 - 5.1.5. Such other alternatives as may be necessary or desirable based on results of the investigation(s) under this Settlement Agreement
 - 5.2. Comparative analysis of alternatives
 - 5.2.1. Overall protection of human health and the environment
 - 5.2.2. Short term effectiveness
 - 5.2.3. Long-term effectiveness
 - 5.2.4. Reduction of toxicity, mobility, or volume through treatment
 - 5.2.5. Implementability
 - 5.2.6. Compliance with ARARs
 - 5.2.7. Costs
 - 5.2.8. Summary of comparative analysis
 - 5.3. Recommended alternative
- 6. List of References, including the title, date and author of referenced documents

List of Figures

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The EE/CA will be submitted to EPA in draft format for review, comment, revision or modification, and approval. Following the satisfactory incorporation of EPA comments, the Final EE/CA shall be incorporated into this SOW by reference.

III. SCHEDULE OF DELIVERABLES AND NOTIFICATIONS

The schedule for notifications to EPA or submission of major deliverables to EPA under this Settlement Agreement is described below. Where a deliverable due date is triggered by EPA notification, comments, or approval, the starting date for the period shown is the date the Respondent received such notification, comments or approval, by certified mail, return receipt requested, unless otherwise noted below. Where a date is triggered by EPA's receipt of a deliverable, the starting date for the period shown is the date EPA receives the deliverable by certified mail, return receipt requested or the date of authorized EPA signature on a hand-deliver form.

Except for monthly email progress reports, documents become final upon approval by EPA.

Table 1 Schedule for Submission of Major Deliverables and Activities		
	Deliverable	Due Date^a
1.	Initial Report	Two months after the Settlement Agreement ^b effective date.
2.	Draft Data Gap Sampling Work Plan	Three months after the Settlement Agreement ^b effective date.
3.	Investigation Activities	Initiate one month after the EPA approval of the Data Gap Sampling Work Plan.
4.	Monthly email Progress Reports	30 days after the Settlement Agreement ^b effective date.
5.	Investigation Data Summary Report	To be defined in the Data Gap Sampling Work Plan or in the event there is not a DGSWP submittal, due date will be negotiated/agreed upon with EPA.
6.	Engineering Evaluation and Cost Analysis	Two months after the EPA acceptance date of the Investigation Data Summary Report.

^a Due dates shown are for initial draft deliverables. Revised deliverables (including one redline version) are due 30 days from receipt of EPA comments or revisions/modifications. Documents become final upon approval by EPA.

^b Settlement Agreement (Administrative Settlement Agreement and Order on Consent) is effective upon signature by both EPA and Respondent.